Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared for:

Chevron
5000 State Route 128
HOOVEN OH 45033

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

December 18, 2009

Project: Hooven Monthly Southwest Quad

Samples arrived at the laboratory on Tuesday, December 15, 2009. The PO# for this group is 0015039270 and the release number is 50008931. The group number for this submittal is 1175179.

Client Sample Description	Lancaster Labs (LLI) #
MW-133,121109 Grab Water Sample	5864331
MW-35,121109 Grab Water Sample	5864332
MW-138,121409 Grab Water Sample	5864333
MW-139,121409 Grab Water Sample	5864334
MW-142,121409 Grab Water Sample	5864335
Trip_Blank,121409 Water Sample	5864336

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	Trihydro Corporation	Attn: Trihydro Database
ELECTRONIC COPY TO	Trihydro Corporation	Attn: Tim Gunn
ELECTRONIC COPY TO	Trihydro Corporation	Attn: Matthew Mitchell

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Questions? Contact your Client Services Representative
Katherine A Klinefelter at (717) 656-2300

Respectfully Submitted,

Marla S. Lord
Senior Specialist

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: MW-133,121109 Grab Water Sample
Monthly Southwest Quad

LLI Sample # WW 5864331
LLI Group # 1175179
OH

Project Name: Hooven Monthly Southwest Quad

Collected: 12/11/2009 10:10 by DB

Account Number: 11494

Submitted: 12/15/2009 09:20
Reported: 12/18/2009 at 12:31
Discard: 02/17/2010

Chevron
5000 State Route 128
HOOVEN OH 45033

SQ133

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
06291	Benzene	71-43-2	N.D.	0.5	1
06291	Chlorobenzene	108-90-7	N.D.	0.8	1
06291	Ethylbenzene	100-41-4	N.D.	0.8	1
06291	Toluene	108-88-3	N.D.	0.7	1
06291	Xylene (Total)	1330-20-7	N.D.	0.8	1

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N093502AA	12/16/2009 18:20	Daniel H Heller	1
06291	TCL by 8260 (water)	SW-846 8260B	1	N093502AA	12/16/2009 18:20	Daniel H Heller	1

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: MW-35,121109 Grab Water Sample
Monthly Southwest Quad

LLI Sample # WW 5864332
LLI Group # 1175179
OH

Project Name: Hooven Monthly Southwest Quad

Collected: 12/11/2009 11:20 by DB

Account Number: 11494

Submitted: 12/15/2009 09:20
Reported: 12/18/2009 at 12:31
Discard: 02/17/2010

Chevron
5000 State Route 128
HOOVEN OH 45033

SQ-35

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
06291	Benzene	71-43-2	N.D.	0.5	1
06291	Chlorobenzene	108-90-7	N.D.	0.8	1
06291	Ethylbenzene	100-41-4	N.D.	0.8	1
06291	Toluene	108-88-3	N.D.	0.7	1
06291	Xylene (Total)	1330-20-7	N.D.	0.8	1

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N093502AA	12/16/2009 18:43	Daniel H Heller	1
06291	TCL by 8260 (water)	SW-846 8260B	1	N093502AA	12/16/2009 18:43	Daniel H Heller	1

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: MW-138,121409 Grab Water Sample
Monthly Southwest Quad

LLI Sample # WW 5864333
LLI Group # 1175179
OH

Project Name: Hooven Monthly Southwest Quad

Collected: 12/14/2009 10:25 by DB

Account Number: 11494

Submitted: 12/15/2009 09:20
Reported: 12/18/2009 at 12:31
Discard: 02/17/2010

Chevron
5000 State Route 128
HOOVEN OH 45033

SQ138

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
06291	Benzene	71-43-2	N.D.	0.5	1
06291	Chlorobenzene	108-90-7	N.D.	0.8	1
06291	Ethylbenzene	100-41-4	N.D.	0.8	1
06291	Toluene	108-88-3	N.D.	0.7	1
06291	Xylene (Total)	1330-20-7	N.D.	0.8	1

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N093502AA	12/16/2009 19:06	Daniel H Heller	1
06291	TCL by 8260 (water)	SW-846 8260B	1	N093502AA	12/16/2009 19:06	Daniel H Heller	1

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: MW-139,121409 Grab Water Sample
Monthly Southwest Quad

LLI Sample # WW 5864334
LLI Group # 1175179
OH

Project Name: Hooven Monthly Southwest Quad

Collected: 12/14/2009 11:35 by DB

Account Number: 11494

Submitted: 12/15/2009 09:20
Reported: 12/18/2009 at 12:31
Discard: 02/17/2010

Chevron
5000 State Route 128
HOOVEN OH 45033

SQ139

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**		**ug/l**	
06291	Benzene	71-43-2	4	J	0.5	1
06291	Chlorobenzene	108-90-7	N.D.		0.8	1
06291	Ethylbenzene	100-41-4	N.D.		0.8	1
06291	Toluene	108-88-3	N.D.		0.7	1
06291	Xylene (Total)	1330-20-7	N.D.		0.8	1

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N093502AA	12/16/2009 19:29	Daniel H Heller	1
06291	TCL by 8260 (water)	SW-846 8260B	1	N093502AA	12/16/2009 19:29	Daniel H Heller	1

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: MW-142,121409 Grab Water Sample
Monthly Southwest Quad

LLI Sample # WW 5864335
LLI Group # 1175179
OH

Project Name: Hooven Monthly Southwest Quad

Collected: 12/14/2009 12:40 by DB

Account Number: 11494

Submitted: 12/15/2009 09:20
Reported: 12/18/2009 at 12:31
Discard: 02/17/2010

Chevron
5000 State Route 128
HOOVEN OH 45033

SQ142

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
06291	Benzene	71-43-2	35	0.5	1
06291	Chlorobenzene	108-90-7	N.D.	0.8	1
06291	Ethylbenzene	100-41-4	120	0.8	1
06291	Toluene	108-88-3	13	0.7	1
06291	Xylene (Total)	1330-20-7	130	0.8	1

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N093502AA	12/16/2009 19:53	Daniel H Heller	1
06291	TCL by 8260 (water)	SW-846 8260B	1	N093502AA	12/16/2009 19:53	Daniel H Heller	1

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: Trip_Blank,121409 Water Sample
Monthly Southwest Quad

LLI Sample # WW 5864336
LLI Group # 1175179
OH

Project Name: Hooven Monthly Southwest Quad

Collected: 12/14/2009 14:25

Account Number: 11494

Submitted: 12/15/2009 09:20
Reported: 12/18/2009 at 12:31
Discard: 02/17/2010

Chevron
5000 State Route 128
HOOVEN OH 45033

SWQTB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
06291	Benzene	71-43-2	N.D.	0.5	1
06291	Chlorobenzene	108-90-7	N.D.	0.8	1
06291	Ethylbenzene	100-41-4	N.D.	0.8	1
06291	Toluene	108-88-3	N.D.	0.7	1
06291	Xylene (Total)	1330-20-7	N.D.	0.8	1

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	N093502AA	12/16/2009 13:43	Daniel H Heller	1
06291	TCL by 8260 (water)	SW-846 8260B	1	N093502AA	12/16/2009 13:43	Daniel H Heller	1

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Quality Control Summary

Client Name: Chevron Group Number: 1175179
Reported: 12/18/09 at 12:31 PM

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: N093502AA	Sample number(s): 5864331-5864336							
Benzene	N.D.	0.5	ug/l	93	93	79-120	0	30
Chlorobenzene	N.D.	0.8	ug/l	95	96	80-120	2	30
Ethylbenzene	N.D.	0.8	ug/l	92	94	79-120	2	30
Toluene	N.D.	0.7	ug/l	93	94	79-120	2	30
Xylene (Total)	N.D.	0.8	ug/l	91	94	80-120	2	30

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: N093502AA	Sample number(s): 5864331-5864336 UNSPK: P861730								
Benzene	102		80-126						
Chlorobenzene	104		87-124						
Ethylbenzene	103		71-134						
Toluene	102		80-125						
Xylene (Total)	102		79-125						

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: TCL by 8260 (water)
Batch number: N093502AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5864331	99	104	101	90
5864332	99	103	101	90
5864333	100	105	102	92
5864334	98	104	101	92
5864335	97	101	103	99
5864336	97	101	100	91
Blank	97	102	100	90
LCS	98	106	103	100
LCSD	98	106	103	100
MS	97	101	104	101

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron Group Number: 1175179
Reported: 12/18/09 at 12:31 PM

Surrogate Quality Control

Limits:	80-116	77-113	80-113	78-113

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Analysis Request/ Environmental Services Chain of Custody

Lancaster Laboratories

For Lancaster Laboratories use only

Acct. # 11494 Group# 1175179 Sample # 5864331-36

COC # 211770

Please print. Instructions on reverse side correspond with circled numbers. temp = 2.9°C

(1) Client: CHEVRON Acct. #: 11494

Project Name/#: MONTHLY SOUTHWEST QUAD DEC 09 PWSID/#: MUNICIPAL/M20

Project Manager: DOUG LAM P.O.#:

Sampler: DALE BARNETT Quote #:

Name of state where samples were collected: OHIO

For Lab Use Only

FSC:

SCR#:

Preservation Codes

H=HCl T=Thiosulfate

N=HNO_3 B=NaOH

S=H_2SO_4 O=Other

(2) Sample Identification	Date Collected	Time Collected	(3) Grab	Composite	Matrix (4) Soil	Water	Other	Total # of Containers	(5) Analyses Requested / Preservation Codes: VOCs	Remarks	(6) Temperature of samples upon receipt (if requested)
MW-133, 121109	12-11-09	1010	X			X		3	X	SEE ATTACHED	
MW-35, 121109	12-11-09	1120	X			X		3	X	ANALYTE LIST	
MW-138, 121409	12-14-09	1025	X			X		3	X		
MW-139, 121409	12-14-09	1135	X			X		3	X		
MW-142, 121409	12-14-09	1240	X			X		3	X		
TRIP BLANK, 121409	12-14-09	1425	X			X		2	X		

Potable ☐ NPDES ☐ Check if Applicable

(7) **Turnaround Time Requested** (TAT) (please circle): Normal (Rush)

(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)

Date results are needed: ASAP

Rush results requested by (please circle): Phone Fax (E-mail)

Phone #: 513 353 1323 Fax #: 513 353 4664

E-mail address: MMITCHELL@TRIHYDRO.COM

(8) **Data Package Options** (please circle if required)

Type I (validation/NJ Reg) TX TRRP-13

Type II (Tier II) MA MCP CT RCP

Type III (Reduced NJ)

Type IV (CLP SOW)

Type VI (Raw Data Only)

SDG Complete? Yes No

Site-specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate volume.)

Internal COC Required? Yes / No

(9) Relinquished by:	Date	Time	Received by:	Date	Time
Dale Barnett	12-14-09	1445			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by: Mary Meeks	12/15/09	920

Analytical Requests for Groundwater Monthly Southwest Quad
Chevron Cincinnati Facility, Hooven, Ohio

Volatile Organics

Benzene
Chlorobenzene
Ethylbenzene
Toluene
Xylenes (total)

Lancaster Laboratories

Environmental Sample Administration
Receipt Documentation Log

Client/Project: Owen

Date of Receipt: 12/15/09

Time of Receipt: 920

Source Code: 501

Unpacker Emp. No.: 2316

Shipping Container Sealed: (YES) NO

Custody Seal Present * : (YES) NO

* Custody seal was intact unless otherwise noted in the discrepancy section

Package: (Chilled) Not Chilled

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	*Comments
1	0129865	2.9°C	TB	WI	Y	B	
2							
3							
4							
5							
6							

Number of Trip Blanks received NOT listed on chain of custody: 0

Paperwork Discrepancy/Unpacking Problems:

Sample Administration Internal Chain of Custody			
Name	Date	Time	Reason for Transfer
[signature]	12/15/09	1025	Unpacking
Annabelle K-Owen	12/15/09	1050	Place in Storage or (Entry)
			Entry
			Entry

Lancaster Laboratories
Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	**BMQL**	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	**MPN**	Most Probable Number
IU	International Units	**CP Units**	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	**NTU**	nephelometric turbidity units
C	degrees Celsius	**F**	degrees Fahrenheit
Cal	(diet) calories	**lb.**	pound(s)
meq	milliequivalents	**kg**	kilogram(s)
g	gram(s)	**mg**	milligram(s)
ug	microgram(s)	**l**	liter(s)
ml	milliliter(s)	**ul**	microliter(s)
m3	cubic meter(s)	**fib >5 um/ml**	fibers greater than 5 microns in length per ml

< less than – The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

ppm parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.

U.S. EPA data qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quatitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
J	Estimated value
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike amount not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY – In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions of Lancaster Laboratories and we hereby object to any conflicting terms contained in any acceptance or order submitted by client.